



APPLICATION REPORT

The Ins and Outs of Casing Cutting Wachs Machine Tools Cut Outside and Inside

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Figure 1 - Wachs EICC is ideal for casing cuts offshore and onshore

The Project

With the increasing depth and pressure of today's wells, multiple casing strings are often run. When driving the production casing (in either a new well or a repair), the casing typically is driven below the wellhead to the depth and finish determined by the wellhead manufacturer. In situations where the casing cannot be driven to the specified depth or the casing requires a final bevel to aid in sealing, a machine tool is required to externally cut the conductor and internally cut (or bevel) the production casing before BOP installation.



Figure 2 - EICC shown cutting the external conductor



Figure 3 - Adaptors available for most manufactured wellheads

The Challenge

Downtime on an unproductive well is measured in thousands or hundreds of thousands of dollars per day, and if safety concerns or environmental damage are involved these lost dollars are the least of an engineer's worries. Companies are constantly challenged to limit expensive, unproductive downtime when installing or repairing production casing.



Figure 4 - Internal cutting module lowered to cutting depth

The Solution

E.H. Wachs EICC (External Internal Casing Cutter) provides a safe, fast and reliable method for cutting both outside and inside at the wellhead. This makes it the ideal device for new installations, field repairs or emergency preparedness, both onshore and offshore. The EICC combines Wachs split frame technology with a removable internal casing cutter to cut a wide range of casing at various depths, both above (external) and below (internal) the

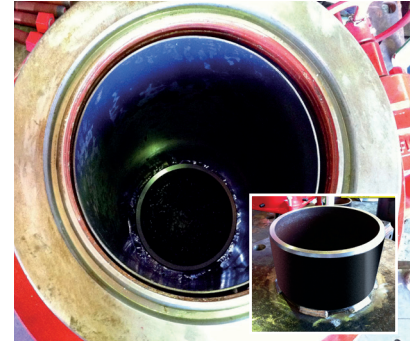


Figure 5 - Completed external and internal cut and bevel

wellhead (see figure 6). The EICC split frame component mounts around the exposed casing O.D. above the wellhead (figure 2), with the internal casing cutter mounting to the split frame and lowered for internal cuts below the wellhead (figure 4).

Ring sizes are available to cut and bevel most grades and weights of the exposed external casing (or drive pipe/conductor) up to a 42" (1067mm) diameter. The internal casing cutter component is available in sizes to cut 7" (179mm) to 13-3/8" (340mm) casings, at depths up to 60" (1524mm) below the wellhead. The front drive pinion housing allows cutting as close as 4.5" (114mm) to the wellhead, requiring minimal axial and radial clearances. The EICC is based on Wachs proven MDSF split frame, and is available with hydraulic or pneumatic drive.

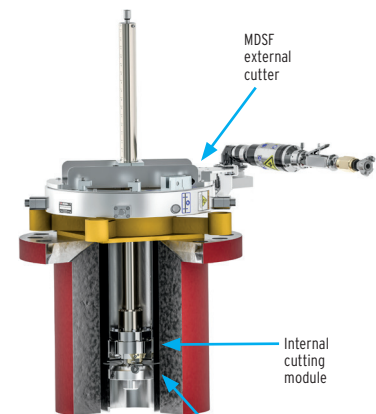


Figure 6 - Cutaway showing external and internal cuts

Executive Summary

All Wachs products use the preferred cold cutting method for precision and safety, and are designed for safe operation in hazardous or potentially explosive environments. Remote control options are available for many of our machine tools for use in extreme environments.



The EICC is just one example of the specialized, portable machine tools we manufacture for onsite machining. Ideally suited to cut off production casings that are stuck or need to be cut below the wellhead, the Wachs EICC machine quickly and safely cuts and bevels the outer conductor and inner production casing while minimizing downtime.

Offering a full range of Split Frame pipe cutters, Guillotine[®] pipe saws, and our industry leading Trav-L-Cutter for pipeline repair, we build machines that work in all conditions.

We don't just think in terms of machine tools, we think in terms of solutions. Talk to one of our product specialists today and let us know what your special machining challenge is. At E.H. Wachs we have the engineering expertise and manufacturing capability to deliver a solution that works, on time and on budget.

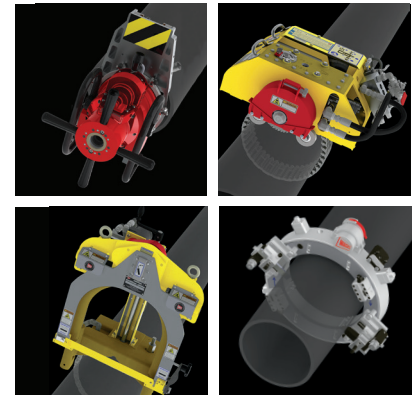
Quality & Innovation Since 1883

E.H. Wachs[®] has a long history of quality manufacturing and product innovation, dating back to 1883. Today our Industrial division builds the finest portable, cold cutting weld prep machine tools including I.D. and O.D. mounted pipe cutters and bevelers, flange facers, the Trav-L-Cutter[®] and Guillotine[®] pipe saws, boiler tube bevelers and handheld valve turners/exercisers.

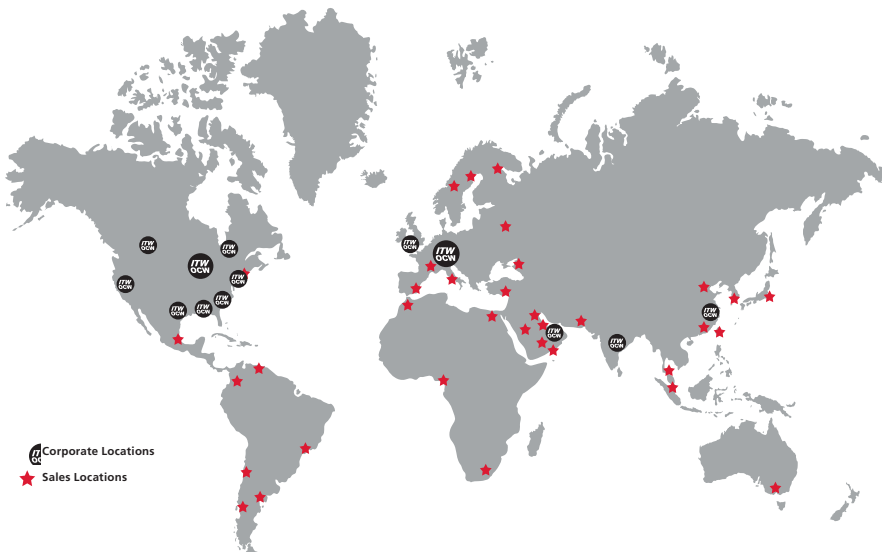
Our products are renowned for their engineering excellence, precision manufacturing and rugged reliability. They're sold and serviced worldwide through our international dealer network and Wachs Sales and Service Centers located throughout the US, in Canada, the UK, Germany, China, India, and the UAE.

E.H. Wachs[®] Industrial Division

- ▶ Industrial Pipe Cutting and Beveling Machine Tools
- ▶ Portable Weld Prep Machine Tools, Sales and Rentals
- ▶ Split Frames, End Preps, Guillotine[®] Pipe Saw, Trav-L-Cutter[®]
- ▶ End Prep Machines, Flange Facers, Hydraulic Power Units
- ▶ Factory Training, at Our Facility or Yours



Clockwise: EP 424 Speed Prep • Trav-L-Cutter[®] Guillotine[®] Pipe Saw • DynaPrep MDSF Split Frame



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